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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/635,064	08/06/2003	Christopher Hable	1001-121	1317

25215 7590 11/28/2007

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EXAMINER	
TOLIN, MICHAEL A	
ART UNIT	**PAPER NUMBER**
1791	

MAIL DATE	DELIVERY MODE
11/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/635,064	HABLE ET AL.	
	Examiner	Art Unit	
	Michael A. Tolin	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,7,9 and 21-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,7,9 and 21-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3-4-2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Species II in the reply filed on 05 October 2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Information Disclosure Statement

2. Two references on IDS filed 04 March 2004 have been crossed out and have not been considered. JP 01164867 and JP 56-118816 were listed on the IDS, but complete copies of these references were not provided. Only abstracts of these references were provided. The abstracts have been considered and are noted on the attached Notice of References Cited.

The remaining references have been initialed and considered by the examiner.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Kagoshima et al. (US 5274006) in view of Agarwal (US 2003/0018095 A1) as evidence of inherency.

Kagoshima forms a foamable epoxy resin composition using liquid epoxy resin as a major component (Abstract; column 2, lines 45-68; column 3, lines 1-13; column 6, lines 53-68). While Kagoshima explains that the composition is adhesive at a temperature below the activation temperature (column 6, lines 53-68), Kagoshima does not explicitly recite tackiness at a temperature in the claimed range. However, such compositions are inherently tacky at a temperature in the claimed range. As evidence for this assertion, Agarwal is cited here. Agarwal explains that conventional foamable compositions comprising liquid epoxy resins as a major component tend to be very tacky during assembly and handling steps, steps which are performed at ambient conditions within the claimed temperature range (paragraph 4).

Regarding the claimed step of providing a nontacky surface, this step is satisfied by Kagoshima's teaching of providing a release paper (column 8, lines 5-13).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 3, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kagoshima et al. in view of Agarwal as applied to claim 1 above, and further in view of Harrison et al. (US H2047 H).

Kagoshima differs from claim 3 in that Kagoshima provides a coating on a release sheet and heats to form the expandable material whereas claim 3 requires applying a film to a preformed expandable material. To the extent that claim 1 might be interpreted to require forming a base material prior to providing the base material with a nontacky surface, claim 1 is rejected here in the alternative.

It is generally known to provide an expandable material with a tacky surface and a nontacky surface. For example Kagoshima forms an expandable material on a release sheet and uses the exposed tacky surface for adhering to a substrate. It is also generally known that tacky expandable materials can be provided with a substantially nontacky surface by applying a non-removable film having a desired level of tackiness. For example, Harrison teaches a tacky expandable material layer in combination with an adhesive layer having a slightly tacky or nontacky surface for ease of handling and allowing suitable application (column 3, lines 16-22; column 8, lines 7-11, lines 19-22; column 10, lines 31-34; column 14, lines 7-28). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply a non-removable layer having a slightly tacky or nontacky surface, thus satisfying the claimed limitation of substantially non-tacky, to the expandable material of Kagoshima because one of ordinary skill in the art would have been motivated to provide Kagoshima's material with a nontacky or

slightly tacky surface for ease of handling and allowing suitable application in accordance with the teachings of Harrison.

Harrison's teaching of extruding the adhesive layer onto the expandable material satisfies the claimed limitation of applying a film since extrusion of a layer onto a substrate conventionally involves forming a film by extrusion and subsequently applying the film to the substrate.

The limitation of claim 21 is clearly satisfied by Harrison.

6. Claims 7, 9, and 22-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kagoshima et al. in view of Agarwal and Harrison et al. as applied to claims 1, 3, and 21 above, and further in view of Kiuchi et al. (US 7029550 B2), Middelman et al. (US 5496613), or Asoshina et al. (4728544).

While Harrison teaches that the various layers should be compatible in chemistry (column 3, lines 40-42), Harrison does not explicitly recite the use of correspondence components, which the specification describes as having identical or similar structure (specification, pages 15 and 16). However, it is generally well known in the art of lamination to provide such correspondence components in adjacent layers in order to achieve good adhesion between layers. See Kiuchi, column 4, lines 12-18. See Middelman, column 4, lines 23-30. See Asoshina, column 5, lines 5-7, lines 24-30. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the claimed correspondence components because one of ordinary skill in the art would have been motivated to achieve good adhesion between the layers of Kagoshima

as modified by Harrison in accordance with well known methods in the art of adhesive bonding as evidenced by Kiuchi, Middelman, or Asoshina.

Regarding claims 9, Kagoshima teaches an epoxy expandable material, and thus epoxy correspondence components would be expected.

Regarding claims 23 and 24, Kagoshima teaches various elastomer or thermoplastic resins and epoxy compounds in the composition (column 2, lines 64-68; column 3, lines 1-13; column 5, lines 1-40), and thus such correspondence components would be expected.

Regarding claims 25 and 26, maximizing the correspondence between components is the expected manner of providing good adhesion between layers. One of ordinary skill in the art would have been expected to appreciate that 100% correspondence is ideal for providing good adhesion, although providing individual layers with desired properties may not allow such high correspondence. Accordingly, determination of the percentage of correspondence components involves no more than expected and routine experimentation for one of ordinary skill in the art in order to optimize adhesion between layers while providing each layer with desired properties. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide correspondence in the claimed range because one of ordinary skill in the art would have been motivated to maximize adhesion while still providing each layer with desired properties through expected and routine experimentation.

Regarding claim 27, Kagoshima teaches epoxy resins having the claimed epoxy equivalent weight (column 2, lines 64-68; column 3, lines 1-6), and thus such epoxy

resins would be expected correspondence components in the film. Harrison also teaches that the adhesive layer should use epoxy resins having epoxy equivalent weights in the claimed range and the claimed weight percentage range (column 11, line 47 to column 13, line 17). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide epoxy resin having the claimed epoxy equivalent weight in the claimed weight percent range in the film because one of ordinary skill in the art would have been motivated to use any known suitable adhesive composition, such as that suggested by Harrison.

Regarding claim 28, it would have been obvious to one of ordinary skill in the art at the time of the invention to contact the base material with release paper because such is conventional for covering and protecting the tacky surface of an expandable material prior to application and one of ordinary skill in the art would have been motivated to cover and protect the base material in accordance with conventional methods.

Regarding claims 29-31, as noted above with respect to Kiuchi, Middelman, or Asoshina, it is generally known to provide identical or similar components in adjacent layers to provide good adhesion between layers. Thus the use of the claimed substantially identical configurations or epoxy resins is the expected manner of providing good adhesion between the layers of Kagoshima as modified by Harrison in view of Kiuchi, Middelman, or Asoshina.

Regarding claims 32-34 Kagoshima teaches application to automobile panels prior to electrocoating (column 7, lines 5-10). Although Harrison suggests adhering the

material by the adhesive layer rather than the expandable material layer, adhering a tacky expandable material to a vehicle is conventional. The use of release layers for covering and protecting a tacky surface of an expandable material prior to application is also conventional. The choice of providing a removable release layer for ease of handling or a non-removable nontacky layer such as that of Harrison for ease of handling involves no more than routine design choice well within the level of ordinary skill in the art. Furthermore, providing a non-removable layer clearly provides the advantage of eliminating a step of removal of a releasable layer. It would have been obvious to one of ordinary skill in the art at the time of the invention to adhere the material in the claimed manner because one of ordinary skill in the art would have been motivated to adhere the expandable material in any known suitable manner such as the conventional method of adhering a tacky surface of an expandable material to an automobile panel. It would have been obvious to one of ordinary skill in the art to use a nontacky non-removable layer such as that taught by Harrison rather than a conventional release layer to protect the expandable material of Kagoshima because one of ordinary skill in the art would have been motivated to provide a nontacky surface for ease of handling by any known and suitable method and further because one of ordinary skill in the art would have been motivated to eliminate the step of removing a conventional release paper.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Tolin whose telephone number is 571-272-8633. The examiner can normally be reached on M-F 9am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael A. Tolin

RICHARD CRISPINO
SUPERVISORY PATENT EXAMINER
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